

UNITED STATES ENVIRONMENTAL PROTECTION REGION III

841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Request for Approval of Removal Action and
\$2 Million Exemption for the Spectron, Inc. Site near
the City of Elkton, Cecil County, Maryland

APR 15 1998

FROM: Karen Melvin, Chief
Removal Enforcement and Oil Section (3HS32)

TO: Abraham Ferdas, Acting Director
Hazardous Sites Management Division (3HS00)

THRU: Dennis P. Carney, Chief
Removal Branch

I. PURPOSE

The purpose of this document is to request approval for construction of a containment system that will prevent contaminated groundwater from entering Little Elk Creek (the "Creek") at the Spectron Superfund Site, located off Route 213, north of Elkton, Maryland. In accordance with the studies conducted by the Spectron, Inc. Site Generator and Transporter Group II ("the PRP Group"), Respondents to Administrative Order by Consent [Docket No. III-91-40-DC] ("1991 Order"), the stream containment proposal is the most feasible alternative to protect the water quality at the location of the Little Elk Creek. The Little Elk Creek runs through the Site and transports releases from the Site downstream to the Elk River. The Elk River empties into the Chesapeake Bay near Elkton. As a result of the investigations described below, a Stream Containment System has been proposed. As detailed in this memorandum, EPA attempted to develop a cleanup alternative that would not disrupt the original Creek, but because of the unique conditions at this Site and the serious complexity of the contamination, we have concluded that the Stream Containment System is the only alternative that will provide timely protection of public health regarding the Creek. The purpose of this memorandum is to request evaluate and document approval of the proposed removal actions described in Section VII below, for the Spectron, Inc. Site.

II. SITE CONDITIONS AND BACKGROUND

A. . Site Description

1. Physical Location

The Site is located at 111 Providence Road, Cecil County, Maryland. The Site is bordered on the east by Elk Valley Road and Providence Road to the south and west. The Creek bisects the Site in a northeast/southwest direction, separating the formerly active solvent recovery facility portion from the portion where the office is located. The designated uses of the Creek are water contact recreation, fishing and protection of aquatic life and wildlife. The Site consists of 8 acres located within a residential and agricultural area near Elkton, Maryland. There are nineteen residences within a quarter mile of the Site. Several residences are within fifty feet of the Site. All of the residences use private drinking water wells. Access to the Site from Elk Valley Road is across a foot bridge over the Creek or through the main gates on Providence Road.

2. Site R_____

From 1961 until approximately August 1988, three solvent recycling facilities operated at this location seriatim. Although the facility operated under three different names, Galaxy Chemicals, Inc., Solvent Distillers, Inc., and Spectron, Inc. ("Spectron"), the principal manager of all three facilities was Paul J. Mraz. These three facilities reclaimed, treated, reprocessed and recycled industrial wastes, which were primarily waste solvents such as halogenated organic solvents (e.g., methylene chloride, tetrachloroethylene and trichloroethylene) and aromatics (e.g., toluene, xylene and benzene). Because the Little Elk Creek Valley is narrow and confining, air releases from the facility remained in the valley. From the beginning of its operation, the facility operators received complaints from nearby residents. Because of the continuous air releases with accompanying odors, the residents also complained to the Cecil County Health Department. Furthermore, there were documented violations of the facility's National Pollution Discharge Elimination System ("NPDES") permit as well as Resource Conservation and Recovery Act ("RCRA") violations. In 1980, EPA filed a complaint in U.S. District Court against the facility for RCRA and Clean Water Act violations. The Court ordered Spectron, Inc. and Paul J. Mraz to close the on-Site lagoons, cap the area and install a pump and treat system to collect and treat the releases from the Site to the Creek. When Spectron, Inc. ceased operating in August 1988, many hazardous substances received, processed, generated and used in its operations were left on-Site.

On April 12, 1989, at the request of the Maryland Department of the Environment ("MDE"), EPA conducted an emergency assessment of the conditions at the Site. EPA found approximately 1,300 drums and 62 tanks containing hazardous substances on-Site. Many of the substances were identified by drum markings, hazardous waste labels, placards, hazardous waste manifests and Spectron records as flammable liquids and solids and as hazardous wastes. Some

of the **drums** and tanks were leaking, rusted and/or dented or were otherwise unsuitable for storage or transport of hazardous wastes. Field tests and laboratory analyses confirmed that approximately **half** of the liquid-containing drums on site had a flash point of 73 degrees Fahrenheit. These substances are designated **Class I** material (most flammable). Further analysis of the contents of the **tanks** and **drums** showed that the drums and **tanks** contained hazardous substances, including, but not limited to, the following: methylene chloride, trichloroethylene, 1,1,1-trichloroethane, toluene, methyl ethyl ketone, acetone and polychlorinated biphenyls ("PCBs").

On June 1, **1989**, the EPA Region III Regional Administrator approved the expenditure of funds ("1989 Action Memo"), pursuant to Section **104** of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), to address the releases and threat of releases at the Site. EPA's actions between June and August **1989** consisted of over packing leaking **drums**, decanting leaking **tanks**, sampling and analysis of substances on-Site, identification and segregation of those substances, treatment and disposal of the contaminated water in the containment dikes and continued **24-** hour Site security and fire watch. The **1989** Action Memo and subsequent OSC Report located in the Administrative Record supporting this action describe in detail the actions taken at that time **as well as** the hazardous substances found at the Site.

On August 21, **1989**, EPA entered into **an Administrative Order by Consent**, ("August **1989** Order"), (Docket No, III-89-23-DC] pursuant to CERCLA Section 106 with the **PRP** Group. The August **1989** Order **required** the continuation of emergency **response** actions for the removal and disposal of the surficial contamination found at the Site, specifically, the aforementioned hazardous substances in overpacked containers, **tanks** and dikes. .

Subsequently, air monitoring at the Site and at private residences near the Site detected vapors containing volatile organic chemicals ("VOCs") on-Site, adjacent to the Site and in private residences near the Site. Levels of VOCs **as high as 150** parts per million ("ppm") have been detected in one or more of the seeps emanating **from** below the surface of the Site. The hazardous substances found on-Site during the **1989** response actions were identified in the uncontrolled seeps discharging **from** the Site into the Creek, **as well as** in piezometer wells installed in the Creek, in **two** angled bedrock monitoring wells underneath the Creek bed, a mile downstream **from** the Site **and** in residential wells.

Contaminant levels which exceed drinking water standards have been identified in on-Site monitoring well samples. Identified contaminants include many VOCs and several heavy metals. Included in this group **are two** chemicals that **are** classified by EPA, the National Toxicology Program ("NTP"), and the International Agency for Research on Cancer ("IARC") as known human carcinogens, i.e., benzene and vinyl chloride. All the residents of the Little **Elk** Creek Valley (also referred to **as** the Providence Valley) use groundwater **as** their source of drinking water. Residential wells in the vicinity of the Site range in depth **from** twenty feet to two hundred and **fifty** feet, with several hand dug wells. In **1987**, there were twenty-one permitted wells within a one-mile radius and several residential wells within fifty feet of the Site.

On January 16, 1990, EPA's Regional Administrator determined that the continued release and threat of a release of hazardous substances from the Site, and specifically from the seeps in the western stream banks of the Creek, may present **an** imminent **and** substantial endangerment to the public health or welfare or to the environment. Warning signs were immediately posted on the Creek both at and below the Site to warn the public of the stream contamination and to advise against fishing in the Creek. EPA entered into negotiations with the PRPs for response actions that could be implemented to mitigate the seeps.

On September 27, 1991, the 1991 Order was entered into by the PRP Group in which the PRP Group agreed to develop a plan to abate, mitigate **and/or** eliminate the seepage of hazardous substances into the Creek by installing a groundwater treatment system consisting of: (i) groundwater extraction wells extending not more than ten feet into the bedrock; and (ii) a groundwater system capable of treating up to 50 gallons-per minute consisting of no more than nonaqueous phase liquid separation, chemical precipitation of metals and solids, steam or air stripping, carbon adsorption and chemical oxidation. The discharge was to be in compliance with effluent limits derived from the NPDES program of the State of Maryland and any additional state and federal law ("Discharge Criteria").

3. Removal Evaluation

The 1991 Order required the PRP Group to abate, mitigate **and/or** eliminate the seepage of hazardous substances into the Creek from the Spectron, Inc. Site by installing a groundwater treatment system consisting of groundwater extraction wells extending not **more** than ten feet into bedrock followed by a groundwater system capable of treating up to 50 gallons per minute. In 1991, a study performed by the PRP Group concentrated on the development of a design for a groundwater extraction and treatment system to mitigate discharges of chemicals of concern from the Site to the Creek. The data generated by the study was presented to EPA in 1992. The data generated by the study clearly showed that the seeps were not the sole source of contamination into the Creek. The seeps, monitoring wells, piezometers (installed in the creek bed) and stream sediment data indicate that there are high levels of contaminants in all four areas and that several sources from the Site contribute to the contamination. The sources are contaminated groundwater, surface water and recharge water that enter the Creek. It concluded that the pump and treat system required by the 1991 Order would intercept less than 25% of the contaminants migrating from the Site into the Creek and would not effectively meet the stream water quality criteria set forth in the 1991 Order. After analyzing the relevant data, EPA reached the same conclusion.

In August 1994, the PRP Group proposed several alternatives to the original pump and treat system. EPA concluded that the proposed alternatives would also not meet the discharge criteria set forth in EPA's 1991 Order. The PRP Group then conducted a Focused Remedial Investigation ("FRI"). The FRI was intended to be a focused investigation of the occurrence of Dense Non-Aqueous Phase Liquids ("DNAPLs") originating from the Site, which are one of the suspected sources of contamination to the Creek, and an evaluation of possible alternatives to control that DNAPL contamination. Based on the findings of the FRI and the identification of

the other sources, including the presence of VOCs in the unconsolidated fill material and natural sediments underlying the Site (overburden) and Creek sediment DNAPL, the PRP Group proposed that a system be developed that would be able to prevent the contaminated groundwater from entering the Creek from all three sources.

4. Release or Threatened Release Into the Environment of Hazardous Substances, or Pollutants or Contaminants

The Administrative Record contains specific information about the hazardous substances that were identified, removed and disposed from the Site during EPA's 1989 response actions, as well as the PRP Group's report describing its performance of related response actions. Hazardous substances have been found in the subsurface similar to those which were found during those original response actions, as **further** described below.

Arsenic, chromium, cadmium, nickel, and manganese were identified in groundwater extracted **from** Monitoring Well ("MW") #3. The analytical **data** showed concentrations of these metals in excess of the Maximum Contaminant Level ("MCL"). MW # 3 is located along the western shore of the Site near one of the seeps that exhibits **high** levels of hazardous substances. Ethyl benzene, methylene chloride, **trichlorobenzene, trichloroethylene, toluene and trichloroethane** were some of the VOCs and semi-volatile chemicals ("semi-voa") identified in excess of the MCLs in MW#3. MW #4 and #5 also exceed MCLs for **certain** VOCs. These wells are located near the bank of the Creek.

Five **seeps** along the west bank of the Creek were sampled. Samples were also collected immediately downstream of the Site **just** below the Providence **Road** bridge. Methylene chloride, **1,2dichloroethane, 1,1,1-trichloroethane, tetrachloroethene, chlorobenzene, 2-butanone, toluene, ethyl benzene and benzene** were among the contaminants identified in the six seeps at very **high** concentrations. The same organic chemical compounds were present in surface water samples collected **from** the Creek. Sample results for all the chemical parameters are set forth in Attachment **A**.

5. NPL Status

The **Spectron, Inc. Site** was proposed for listing on the CERCLA National Priorities List ("NPL") in **October 1992**. In May **1994**, EPA placed the **Spectron, Inc. Site** on the NPL by publication in the **Federal Register** (see **59 Fed. Reg. 27989** (May **11, 1994**)).

B. Actions to Date

1. Previous Actions

Previous actions conducted at the Site are presented in detail in the Site Background Section, above.

2. Current Actions

The FRI conducted in 1994 identified removal alternatives to prevent the hazardous substances released from the Site from entering the Creek. A stream containment design was proposed at that time and is currently in its final design stage. The design calls for a gabion mat installed over a synthetic membrane with a "french drain" system which drains into a sump that will collect the contaminated Creek water, pump and treat it, and discharge the treated water back into the stream. The gabion mat will permit relatively easy repairs, as well as serve as a substrate for the replacement of stream vegetation.

In December 1997, numerous surface water samples were collected from the Creek as far downstream from the Spectron facility as one mile. The sampling confirmed that a Creek containment system would be necessary to prevent substantial sources of contamination from entering the Creek from the Site.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The State and EPA have worked together at this Site, and continue to coordinate concerning response actions at this Site. The County has provided health consultations through a National Association of City and County Health Officers ("NACCHO") grant provided by the Agency for Toxic Disease Registry ("ATSDR"). Both the State and the County have participated in public meetings.

2. Potential for Continued State/Local Response

Both the MDE and the Cecil County Health Department have supported the actions of EPA in the past with regard to this Site. Both MDE and the Health Department recognize the need for action to protect the public health and welfare of the residents impacted by the Site releases, and they have expressed their support of this specific action.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan outlines the factors which should be considered in determining the appropriateness of a removal action. Under Section 300.415(b)(2):

- A) 300.415(b)(2)(i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;"

High concentrations of hazardous substances, both heavy metals and volatile organic compounds in on-Site monitoring wells, seeps, sediments and groundwater have been

documented in analytical data since the 1980s, as described above. Some of the hazardous substances **are** above Maximum Contaminant Levels ("MCLs") for Drinking Water Standards and have been found in some of the residential wells. Some of the hazardous substances are above the State Water Quality Criteria and relevant federal Ambient Water Quality Criteria and are a risk to both aquatic life and the quality of the drinking water from private wells.

- B) 300.415(b)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems;"

Contamination of private residential wells, used for drinking water, has been documented since 1988 to the present. Stream contamination has been documented since at least 1989. Concentrations of several hazardous metals and organic compounds in the Creek exceed the MCLs, the State Water Quality Criteria and relevant federal Ambient Water Quality Criteria. The Creek is designated for the following uses under the State of Maryland's NPDES Program: water contact recreation, fishing and protection of aquatic life and wildlife. The Creek empties into the **Elk** River which drains into the Chesapeake Bay. The benthic and riparian habitat in the vicinity of the Site has likely been adversely influenced by contamination originating from the Site, **as** ecological risk may be posed by a fraction of the level of contamination found **at** the Site. Additionally, **fish** consumption represents another **potential** risk to human health, due to possible bio-accumulation of hazardous substances from the **Creek in fish** tissue. **As long as** the **releases** into the Creek occur, the potential risk to human health (**through drinking** water supplies and **fish** consumption) and sensitive ecosystems exists.

- C) 300.415(b)(2)(iv) "High levels of **hazardous** substances or pollutants or **contaminants** in soils largely at or near the surface, but may migrate;"

There is a shallow overburden on the bedrock on-Site and the Site itself has an asphalt cap which prevents migration by surface runoff and mitigates the potential for dermal contact on Site. The groundwater and surface water **are** most **affected** and **are** threatened by the on-going migration of **high** levels of VOCs and semi-volatile chemicals in soils and sediments. This migration results in **contamination** migrating into the Creek and the private residential wells used **for** drinking water.

- D) 300.415(b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released:"

Heavy **rains** **cause** **rapid** increase in the water level of the Creek. Flooding may increase the amount of **hazardous** substances transported downstream by increasing the amount of run-off from the Site. These hazardous substances may then **increase** the contamination in private residential wells.

- E) 300.415(b)(2)(vii) "The availability of other appropriate Federal or State response mechanisms to respond to the release."

The State and local authorities do not have the resources to perform a removal of this magnitude or complexity.

IV. ENDANGERMENT DETERMINATION

Based on the information available, EPA had determined that a threat to public health, welfare and/or the environment exists due to the actual or threatened releases of hazardous substances. These actual and threatened releases of hazardous substances from this Site, if not addressed by implementing appropriate response actions, may continue to present an imminent and substantial endangerment to public health, welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c) of CERCLA, 42 U.S.C. § 9604(c), describes those circumstances under which the Agency may exceed the \$2 million statutory limit for Removal Actions. Specifically, the consistency waiver under Section 104(c) states that "continued response action is otherwise appropriate and consistent with the remedial action to be taken." The proposed removal actions identified in this document meet the consistency exemption criteria of CERCLA Section 104(c) for continued response beyond the \$2 million statutory limit for Removal Actions. Specifically, the proposed actions are both appropriate and are believed to be consistent with any future remedial action to be taken at the Site.

The continued Removal Actions for which funding is being requested are consistent with the objectives of the remedial action being contemplated by the Remedial Program. Presently, additional information is being gathered for selection of a long-term remedy for this Site. The proposed removal actions are not expected to impede the implementation of any possible future remedial actions and are intended only to deal with the immediate threats posed by the Site. The proposed removal actions will eliminate the most immediate threats to the public and the environment.

VI. IDENTIFICATION AND ANALYSIS OF REMOVAL ACTION ALTERNATIVES

The FRI performed by the PRP Group in 1994 identified several alternative responses to the proposed shallow pump and treat system. The alternatives that were proposed to and considered by EPA were as follows:

A. Creek Aeration

This option would involve blowing large volumes of air through the Creek water after the contaminants mix in the Creek. This could cause the contaminants to volatilize, thus reducing downstream migration. While this option might reduce

downstream migration of contaminants away from the Site, it would increase the contaminant levels in the air at the Site and would not address the potential for exposure by direct contact to the seeps themselves.

B. Pump and Treat Shallow Ground Water

This option would involve installing shallow groundwater wells at the Site to intercept highly contaminated groundwater before it seeps along the creek bank into the Creek. This option would also include covering the predominant seep areas with riprap to prevent direct contact with contaminated soil. While this option could address potential exposure to the highly contaminated seeps, it would not meet State Water Quality Criteria because it does not address bedrock groundwater recharge to the Creek or the pure solvents in the Creek sediments. As discussed above, the study concluded that this alternative would only address a fraction of the sources of contamination to the Creek.

C. Sediment Removal

This option would involve excavating the highly contaminated sediments in the middle of the Creek, which contain several inches of hazardous wastes. This option also would not meet the State Water Quality Criteria because it fails to address the seeps and the bedrock groundwater that are transporting contamination into the Creek.

D. Combination

This option would involve combining sediment removal, shallow groundwater pump and treat, and Creek aeration. This combination of options removes more contamination than any one of these options alone. However, State Water Quality Criteria would not be met in the 850 foot stretch of the Creek at the Site. Also, this option would not abate the significant air releases of contaminants from the aeration system.

E. EPA's Preferred Removal Alternative - The Stream Containment System

The lining of approximately 850 feet of Creek length at the Site with an impervious, chemical resistant, synthetic membrane from just below the Spectron dam to just past the Providence Road Bridge will effectively stop releases from the Site to the Creek. Mats of rock encased in chain-link fence (Gabion mats) shall be placed on the membrane or liner to protect the liner and provide a surface on which to rebuild the habitat in the Creek. Underneath the membrane, a french drain system shall collect the contaminated groundwater. A small treatment plant shall be constructed to treat the contaminated water collected beneath the liner, which will then be discharged back to the Creek. This alternative:

- 1) captures contamination from shallow ground water that enters the Creek from the seeps along the bank;
- 2) captures contaminated deep or bedrock groundwater that discharges into the Creek from below;
- 3) captures contaminants resulting **from** dissolution of pure solvents that are in the Creek sediments.

This alternative is set forth in detail in Section VII, below. The removal alternatives were reviewed and the Stream Containment System design is concluded to be the only proposal that would meet all the State Water Quality Criteria. **As** discussed above, **EPA** had attempted to develop a cleanup alternative that would not disrupt the Creek, but because of the unique conditions at this Site and the serious complexity of the contamination, we have concluded that the Stream Containment System is the only alternative at this point that will provide timely protection of public health.

VII. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions - The Stream Containment System

1. Description

- (a) Conduct a detailed ecological baseline evaluation in accordance with EPA's "Rapid Bioassessment Protocols for **Use** in **Streams** and Rivers," May **1989**, to characterize the existing ecological conditions present at the Site prior to the installation of the Stream **Containment** System for all information to complete the post-construction **restoration/mitigation** outlined in (f) and (g), below;
- (b) Successfully relocate stream habitants, to the extent practicable, and then prepare the stream bed for installation of the Stream Containment System at all locations where the **Liner** specified in (d). below, will be installed by removing substrate material **and/or** regrading and installing a subgrade aggregate bedding layer to provide **an** even surface for the liner;
- (c) Construct **a** collection system that shall capture all contamination emanating from the source **areas**, which include, but **are** not limited to, Creek sediment contamination. the seeps located on the Creek **banks and DNAPL** discharging from bedrock and overburden, that could be impacting the Creek; **--**
- (d) Install an **impervious**, chemical resistant, synthetic membrane liner at all locations in the Creek where **contamination** from the Site may impact **the** Creek that **shall** isolate Creek **flows** from the source areas including, but not limited **to**, those identified in (c), above. **Minimize** interference **with** Creek flows by installing the liner during low **flow** conditions, and through use of temporary in-stream diversion dams and pumping;

(e) Construct and install a groundwater treatment system for the contaminated water that shall treat all **contaminated** liquid collected through operation of the collection system identified in (c), above, to meet ARARs identified in Attachment A, and then discharge treated water back to the Creek in accordance with the identified ARARs;

(f) Place gabion mats over the liner specified in (d), above, to maintain the integrity of the liner, and provide a substrate for the re-establishment of the ecological conditions that had been present in the waterway prior to the installation of the containment system and **as** described by the ecological baseline evaluation conducted pursuant to (a), above;

(g) Operate and maintain the collection system identified in (c), above, the treatment system in (e), above, and the gabion system in (f), to meet all ARARs including those related to re-establishing the ecological conditions that had been present in the Creek prior to the installation of the Stream Containment System;

(h) Assure the proper disposal of any material removed from the Site in accordance with applicable laws and regulations, including but not limited to 40 C.F.R. § 300.440.

2. Contribution to Remedial Performance

The Site is currently listed on the **NPL**. The proposed removal action is consistent with accepted removal practices and is expected to abate **certain** threats ~~that~~ meet **NCP** removal criteria. The proposed removal action **is** anticipated to be consistent with **future** remedial actions at **this** Site.

3. Description of Alternative Technologies

The proposed removal actions at this Site do not preclude the use of alternative technologies to mitigate the threats **posed** by current conditions at the Site in the **future**. It does not itself utilize such technologies.

4. Compliance with Applicable, Relevant and Appropriate R _____ ("ARARs")

The **selected** removal action alternative set forth in this memorandum shall comply with all Federal **and State** applicable **or** relevant and appropriate environmental and public health requirements. **The** identified ARARs for the removal action described herein are set forth in Attachment **A**.

5. Project Schedule

It is anticipated that the scope of work defined by this Action Memo can be completed within the statutory limit for removal action.

B. Estimated Costs

The estimated costs associated with the proposed removal actions are as follows:

EXTRAMURAL COSTS

Regional Allowance Costs

ERCS	\$ 8,485,515.00
15% Contingency	\$ 1,497,443.00

Other Costs not Funded from
Regional Allowance

SATA	\$ 1,500,000.00
Contingency Costs	\$ 225,000.00

TOTAL EXTRAMURAL	\$1 1,707,958.00
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INTRAMURAL COSTS

Direct Costs	\$ 2,834,200.00
Indirect Costs	\$ 850,260.00

TOTAL INTRAMURAL	\$ 3,684,460.00
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TOTAL REMOVAL PROJECT CEILING	\$15,392,418.00
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VIII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If no action is taken or the action is delayed, the release or potential release of hazardous substances ~~from the~~ Site to ~~the~~ Creek and to the residential wells near the Creek will continue. The potential ~~for~~ adverse effects on human and ecological receptors will also continue.

IX. OUTSTANDING POLICY ISSUES

There ~~are~~ no outstanding policy issues pertaining to the Site.

X. ENFORCEMENT

Upon approval of this removal action memorandum, it is anticipated that the PRP Group will complete the design for the stream containment and implement construction in a timely manner. The Stream Containment System is estimated to be constructed no later than Spring 1999.

XI. RECOMMENDATIONS

This decision document represents the selected removal actions for the Spectron, Inc. Site near Elkton, Cecil County, Maryland, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based upon the administrative record for the Site. Because conditions at the Site meet the criteria in the NCP, 40 C.F.R. § 300.415, for a removal action, I recommend your approval of the proposed removal actions.

You may indicate your approval or disapproval by signing below.

APPROVED: Deanna P. Carney DATE: 4/15/98
for Aberdeen Feeders
DISAPPROVED: _____ DATE: _____

Table A - ARARs
Little Elk Creek Stream Containment System
EPA Removal Project
Spectron, Inc. Superfund Site

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Clean Water Act: Federal Ambient Water Quality Criteria for the Protection of Aquatic Life	33 U.S.C. § 1314	Relevant and Appropriate	These are non-enforceable guidelines established pursuant to Section 304 of the Clean Water Act that set the concentrations of pollutants which are considered adequate to protect human health based on water and fish ingestion and to protect aquatic life. Federal ambient water quality criteria may be relevant and appropriate to CERCLA cleanups based on the uses of a water body.	Little Elk Creek and the wetlands adjacent to the Site are designated for protection of aquatic life and wildlife, water contact recreation and fishing. Those criteria which deal with fish ingestion and protection of aquatic life are relevant and appropriate to the Creek and the wetlands unless a State water quality standard exists for that particular pollutant.
Maryland - Water Pollution: Water Quality		Applicable	These are criteria to maintain surface water quality.	Little Elk Creek is a surface water of the State of Maryland and, pursuant to COMAR 26.08.02.07F(5), it is designated for Use I. Therefore, all criteria applicable to a discharge to a Use I surface water must be met by any point source discharges from the project.
Designated Uses (stream classification)	COMAR 26.08.02.02		Defines designated uses.	Use I: Water Contact Recreation, Protection of Aquatic Life and Wildlife and Fishing.
Surface Water Quality Criteria	COMAR 26.08.02.03		Provide qualitative criteria for discharges to surface waters.	The ground water treatment plant discharge and any point source discharge from the construction zone shall meet the surface water quality criteria for fresh water streams and rivers and the general water quality criteria.
Toxic Substance Water Quality Criteria for Surface Waters	COMAR 26.08.02.03-1.B		Establishes boundaries for fresh water, estuarine and salt water boundaries.	Little Elk Creek is within a fresh water boundary.
Numerical Criteria for Toxic Substances in Surface Waters	COMAR 26.08.02.03-2		Discusses numerical criteria and the opportunity to develop site-specific criteria	Specific criteria are listed for arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc, Aldrin, benzene, 1,1-dichloroethene, DDT, Dieldrin, Endrin, Lindane, polychlorinated biphenyls, 1,1,1-trichloroethene, Toxaphene, trichloroethene, and dioxin. (Note that although metals are not major contaminants of concern, they may be present in the ground water and, if so, any point source discharge must meet the applicable criteria).
Water Quality Criteria Specific to Designated Uses	COMAR 26.01.02.03-3A		Requires that water designated for certain uses meet certain criteria.	Surface water designated I must meet specified biological criteria (fecal coliform), dissolved oxygen, temperature, pH, turbidity, and chemical-specific criteria. Discharge from groundwater treatment plant and any point source discharge from the construction zone must meet these criteria.

ARAR or TRC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Surface Water Mixing Zones	COMAR 26.08.02.05		Describes how mixing zones can be used in calculating discharge concentrations.	The allowable mass rate and concentration of the treated ground water and of any water discharged from any point source at the construction zone will take the mixing zone requirements allowable under the regulation into account.
Surface Water Use Designation	COMAR 26.08.02.07		Requires that the surface water be protected according to its designated use and that any stream segment not listed in COMAR 26.08.02.08 is designated Use I.	Since Little Elk Creek at the location of the Site is not listed in COMAR 26.08.02.08, it is designated Use I. Any discharge concentrations and mass loadings shall protect Little Elk Creek for Use I designated uses.
Maryland - Water Pollution; Discharge Limitations		Applicable		
Effluent Limitations	COMAR 26.08.03.01		Describes which discharges are permitted and which are not, and sets standards for allowable discharges.	The substantive standards of these requirements shall be met by the discharge from the groundwater treatment plant and any point source discharges from the construction zone.
Control of the Discharge of Toxic Substances to Surface Waters	COMAR 26.01.03.07		Describes when discharges must be monitored and when the State may "grant a temporary modification from one or more effluent limitations based on water quality criteria for toxic substances."	Any discharges from the ground water treatment plant will be monitored for biotoxicity unless EPA determines at a future date that this is not necessary to protect the environment.
Maryland - Water Pollution: Discharge Permit Limits	COMAR 26.08.04.02-I A and D	Applicable	Describes general types of conditions to be included in a permit and describes mixing zone calculations.	Any point source discharge shall meet all substantive criteria, but no permit will be obtained.
Maryland - Water Pollution: Monitoring	COMAR 26.01.0403A	Applicable	An authorized discharge shall be subject to any monitoring requirements deemed necessary.	EPA will determine appropriate monitoring requirements for the treatment plant discharge and any point source discharge from the construction zone based on all available information. This will include, but not be limited to, sampling to determine if dioxin is present in any such discharge.
Maryland - Nontidal Wetlands: General and Permit Application and Processing		Applicable	Provides criteria for the following activities if undertaken in a nontidal wetland or its buffer zone: (i) removal, excavation or dredging of any materials, (ii) changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics, (iii) disturbance of the water level or water table by drainage, impoundment or other means, (iv) dumping, discharging of, or filling with material, or placing of obstructions, (v) grading or removal of material that would alter existing topography, or (vi) destruction or removal of plant life that would alter the character of a nontidal wetland.	There are nontidal wetlands adjacent to Little Elk Creek. Any activities in these wetlands or their buffer zone that involve the following must comply with the substantive standards of these regulations: (i) removal, excavation or dredging of any materials, (ii) changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics, (iii) disturbance of the water level or water table by drainage, impoundment or other means, (iv) dumping, discharging of, or filling with material, or placing of obstructions, (v) grading or removal of material that would alter existing topography, or (vi) destruction or removal of plant life that would alter the character of a nontidal wetland.
Definitions	COMAR 26.23.01.01			
Activities Exempt from Permit Requirements	COMAR 26.23.01.02			

ARAR or FBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ANARs in the Context of this Removal Project
Expanded Buffer	COMAR 26 23 01 04		Describes the size of the wetland buffer.	Any areas with steep sides shall have a 100-foot buffer.
Criteria for Review of Nontidal Wetland Permit Applications	COMAR 26 23 02 04		Describes how the State reviews nontidal wetland permits.	All substantive criteria shall be complied with, but no permit will be obtained.
Water Quality and Water Management Plans	COMAR 26.23.02.06		Subsection 26.23 02.06A provides substantive criteria for meeting Section 26.232.02.04A(3)'s requirement that a regulated activity cannot degrade State waters. Subsection 26.23 02.06B requires any regulated activity to be consistent with any approved comprehensive watershed management plan.	The substantive criteria shall be met.
Maryland - Water Management: Construction on Nontidal Waters and Floodplains		Applicable		
Scope	COMAR 26.17.04.01			
Definitions	COMAR 26.17.04.02			
Permit Applications	COMAR 26.17.04.04 C		States that a project must be consistent and compatible with overall basin, flood management, or watershed development plans, if any, prepared, adopted, or approved by the State or a local jurisdiction.	
	COMAR 26.17.04.04D		States that the State may require an environmental study of the significant effects that includes an inventory of the existing vegetation, fish, wildlife, scenic, recreational, and historic values located within the project area.	EPA has determined that an environmental study of the significant effects of the removal project must be performed that includes an inventory of the existing vegetation, fish, wildlife, scenic, and recreational values located within the project area.
	COMAR 26.17.04.04 E		States that a permit application shall include provisions assuring the maintenance and operation of the proposed project throughout the project's existence.	All substantive criteria shall be complied with, but no permit will be obtained.
	COMAR 26.17.04.04F		States that hydrologic calculations shall be based on the ultimate development of the watershed, assuming existing zoning, unless waived by the Administration.	
Changes in Stream Channels or Floodplains	COMAR 26.17.04.07 B(3-7)		Describes constraints for projects that encroach on a floodplain.	The removal project is within a floodplain.

ARAR or TDC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding A-A-Rs in the Context of this Remedial Project
Temporary Construction in a Stream Channel or Floodplain	COMAR 26.17.04.08 B(1-3)		Describes temporary sediment control device design criteria.	
	COMAR 26.17.04.08 C(1-2)		Describes design criteria for temporary access crossings in waters of the State.	
	COMAR 26.17.04.08 E(1-2)		Describes design criteria for storm drain outfalls from temporary construction in floodplains.	
	COMAR 26.17.04.11 B(3)		States that generally it is contrary to public interest to block free passage of fish.	
Criteria for Evaluating Applications	COMAR 26.17.04.11 B(5)		States that construction in nontidal wetlands is not in the public interest. If construction is unavoidable, measures must be taken to mitigate, replace or minimize the loss of aquatic or terrestrial habitat. Also provides restrictions for construction during certain periods of the year in trout waters and water with anadromous fish runs.	
	COMAR 26.17.04.11 B(6)		Prohibits projects that increase the risk of flooding to other property owners.	
	COMAR 26.17.04.11 B(7)		Prohibits construction or substantial improvement to any residential, commercial or industrial structure in the 100-year floodplain and below the 100-year flood elevation.	
	COMAR 26.17.04.11 E		Allows the State to grant variances under certain criteria.	
Maryland - Obstructing Passage of Fish Prohibited	Maryland Code, Section 4.501 of the Natural Resources Article	Applicable	Provides that an obstruction may not be placed across any stream, so as to impound any fish water or its free access up and down the stream.	The construction of and design of the Stream Containment System shall comply with this requirement.
		Applicable	States that all necessary steps shall be taken to first avoid adverse impacts and then minimize losses of nontidal wetlands. If losses are not avoidable, mitigation is required.	
Maryland - Nontidal Wetlands - Mitigation		Applicable	Requires a minimum replacement ratio of 1:1 on an acreage basis plus additional replacement for lost value.	
	COMAR 26.23.04.02			
	COMAR 26.23.04.03			

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Federal Regulation of Activities in or Affecting Wetlands	40 CFR 6.302(a) and 6 Appendix A	To Be Considered	Sets forth EPA requirements for carrying out provisions of Executive Order 11990 (Protection of Wetlands). No activity that adversely affects a wetland shall be permitted if a practicable alternative that has less effect is available. If there is no other practicable alternative, impacts must be minimized and/or mitigated.	The substantive standards of this regulation are applicable to all Site activities that could affect wetlands. EPA has determined that there is no practicable alternative that has less effect. Efforts to minimize and mitigate, including potential off-site mitigation, will take place in order to have no net loss of wetland habitat and value.
Federal Regulation of Activities in or Affecting Floodplains	40 CFR Section 6.302(b) and 6 Appendix A	To Be Considered	Sets forth EPA requirements for carrying out provisions of Executive Order 11988 (Floodplain Management). No activity that adversely affects a floodplain shall be permitted if a practicable alternative that has less effect is available. If there is no other practicable alternative, impacts must be mitigated to the extent possible.	The substantive standards of this regulation apply to all activities at the Site, because the Site is in a floodplain. The stream containment complies with this regulation because there is no impact to the 100-year or 500-year floodplain. The ground water treatment plant will be built in accordance with the standards and criteria of the regulations promulgated pursuant to the National Flood Insurance Program.
Fish & Wildlife Coordination Act	16 USC 661 <i>et seq.</i> 40 CFR 6.302(g)	Applicable	Requires Federal agencies involved in actions that will result in the control or structural modification of any natural stream or body of water for any purpose, to take action to protect the fish and wildlife resources which may be affected by the action. Consultation with the US Fish and Wildlife Service and the appropriate State agency is required to ascertain the means and measures necessary to mitigate, prevent, and compensate for project-related losses of wildlife resources and to enhance the resources.	Substantive requirements of the law/regulation will be met, and in fact, the US Fish and Wildlife Service and the Maryland Department of Natural Resources have been consulted. The project, through on-site and potentially off-site mitigation, will result in no net loss of fish and wildlife resources.
Coastal Zone Management Act of 1972; Coastal Zone Act Reauthorization Amendments of 1990	16 USC 1451 <i>et seq.</i> 15 CFR Part 930.17, 20, 31-33, 37(a), 39(b-d)	Applicable	Requires that Federal agencies conducting or supporting activities directly affecting the coastal zone, conduct or support those activities in a manner that is consistent with the approved appropriate State coastal zone management program.	The Spectron site is within the coastal zone. The project will be conducted in a manner that is consistent with the approved Maryland coastal zone management program, to the maximum extent practicable, but no procedural requirements in the regulations must be followed.
Council on Environmental Quality	40 CFR 1500.2(f)	Relevant and Appropriate	Requires use of all practicable means, consistent with the requirements of NEPA, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects upon the quality of the human environment.	
Control of Noise Pollution		Applicable	Provides limits on noise levels for the protection of human health and welfare and exemptions to those limits, and specifies standards to be met by sound level meters to be used to determine compliance.	Substantive standards of these regulations shall be met at the Site property boundaries during construction and operation of the ground water treatment plant, unless the activity in question is subject to an exemption under COMAR 26.02.03.03 B(2).
Definitions	COMAR 26.02.03.01			
General Regulations	COMAR 26.02.03.03A, B(2), and (D(2) and (3)			

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Clean Water Act (CWA); National Discharge Elimination System Requirements			Enforceable standards for all discharges to waters of the United States.	Discharge limits shall be met by the discharge from the groundwater treatment plant and any point source discharge from the construction zone. Only substantive requirements shall be met and no permit shall be obtained.
Scope of the NPDES permit requirement				
Definitions				
New sources and new dischargers				
Permit Conditions	40 CFR Parts 122.41(a), (d), (e), (j)(1), 122.42(m)(1) and (4); 122.45; 125.1-3; and 125.100-104			
Maryland Stormwater Management		Applicable	Contain minimum requirements for the control of stormwater, to be included in ordinances to be adopted by local government bodies.	The substantive standards of these requirements are applicable to the remedial activities at the Site, unless such activity would be exempted under COMAR 26.09.02.05 B. No permit will be obtained.
Definitions	COMAR 26.17.02.02			
When Stormwater Management is Required	COMAR 26.17.02.05 A and B			A stormwater management plan, subject to EPA approval, is required for this project.
Minimum Control Requirements	COMAR 26.17.02.06A(2)		Requires that post-development peak discharge rates for a 2- and 10-year frequency storm event must be maintained at a level equal to or less than pre-development peak discharge rates.	
Stormwater Management Design Criteria	COMAR 26.17.02.04		Describes specific stormwater management design criteria.	
Section 10 of the River and Harbors Act	33 U.S.C. Section 403	Applicable	Permitting requirements for dredging, filling, or construction with the waters of the U.S.	Due to the fact that the containment system will be constructed in waters of the U.S. and will involve sediment dredging and redeposition, the removal work will comply with substantive requirements, but no permit will be obtained.
General policies for evaluation of permit applications	33 CFR Part 310.4			
Permits for structures within or affecting navigable waters of the U.S.	33 CFR Part 322			
Discharges of dredge or fill material in waters of U.S.	33 CFR Part 323			
Definition of waters of the U.S.	33 CFR Part 328			

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARs in the Context of this Removal Project
Definition of navigable waters of the U.S.	33 CFR Part 329			
Maryland Erosion and Sediment Control		Relevant & Appropriate	Requires preparation of an erosion and sediment control plan for activities involving land clearing, grading and other earth disturbances and establishes erosion and sediment control criteria.	The substantive standards of these regulations shall apply to clearing, grading, and excavation activities at the Site. No permit will be obtained.
Definitions	COMAR 26.17.01.01			
Activities for Which Approved Erosion and Sediment Control Plans are Required	COMAR 26.17.01.05 A and B			
Application for Approval of Erosion and Sediment Control Plans	COMAR 26.17.01.07 B	Relevant & Appropriate		
Approval or Denial of Erosion and Sediment Control Plans	COMAR 26.17.01.08 A and B	Relevant & Appropriate		
Maryland - Water Appropriation and Use			Establishes criteria and terms for persons appropriating or using water.	The substantive standards of these regulations would apply since ground water will be removed as part of the containment system. No permit will be obtained.
Definitions	COMAR 26.17.06.01			The containment system will not have an area-wide impact on the water table since the collection system is a passive system and the treated ground water is being discharged back into the creek.
Scope and Applicability	COMAR 26.17.06.03			
Criteria for Approval of Water Appropriation or Use Permits	COMAR 26.17.06.05			
Maryland - Air Quality: General Emission Standards, Prohibitions		Applicable	Provides air quality standards, general emission standards and restrictions for air emissions from articles, machine, equipment, etc. capable of generating, causing, or reducing emissions.	Any equipment or construction capable of generating, causing or reducing emissions (e.g., excavation/dredging; air stripper), shall meet these substantive requirements. No permit will be obtained.
Definitions	COMAR 26.11.06.01			
Visible Emissions	COMAR 26.11.06.02			
Volatile Organic Compounds	COMAR 26.11.06.06			
Nuisance	COMAR 26.11.06.08			
Odors	COMAR 26.11.06.09			

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Maryland - Air Quality: Toxic Air Pollutants		Applicable	Requires emissions of Toxic Air Pollutants ("TAPs") from new and existing sources to be quantified (also describes methods of quantification); establishes ambient air quality standards and emission limitations for TAP emissions from new sources; requires best available control technology for toxics for new sources of TAPs.	<p>The ground water treatment plant shall be designed to meet the emission standards. The design shall use the procedures in the regulations. No permit will be obtained (only the substantive standards shall be complied with).</p> <p>The construction shall be performed in such a manner as to comply with the substantive requirements of these regulations.</p>
Definitions	COMAR 26.11.15.01			
Applicability and Exemptions	COMAR 26.11.15.03			
Requirement to Quantify Emissions	COMAR 26.11.15.04 A and C			
Control Technology Requirements	COMAR 26.11.15.05			
Ambient Impact Requirements	COMAR 26.11.15.06			
Demonstrating Compliance with Regulation .06	COMAR 26.11.15.07			
Screening Levels	COMAR 26.11.15.08			
Procedures for Requesting Special Permits	COMAR 16.11.15.10			
Class I Toxic Air Pollutants	COMAR 26.11.15.11			
Levels Used to Review Ambient Impacts	COMAR 26.11.15.13			
Control of Air Emissions from Air Strippers at Superfund Groundwater Sites	OSWER Directive 9355.0-28, June 15, 1989	To Be Considered	This policy guides the decision of whether additional controls (beyond those required by statute or regulation) are needed for air strippers at groundwater sites.	This policy would be considered in determining the necessary emission controls. Sources most in need of additional controls are those with emissions rates in excess of 3 lbs./hour or a potential rate of 10 tons/year of total VOCs.
Resource Conservation and Recovery Act of 1976; Hazardous and Solid Waste Amendments of 1984	SEE BELOW Federal regulations would not apply in those instances in which Maryland has adopted regulations which are at least as stringent as the corresponding federal regulation.	SEE BELOW	Regulates the management of hazardous waste, to ensure the safe disposal of wastes, and to provide for resource recovery from the environment by controlling hazardous wastes "from cradle to grave."	SEE BELOW
Maryland - Disposal of Controlled Hazardous Substances		Applicable/ Relevant and Appropriate	Provides definitions for when hazardous waste management requirements are triggered.	
Definitions	COMAR 26.13.01.03			These criteria and definitions shall be used in determining whether or not materials are to be handled as hazardous waste.

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
	COMAR 26.13.01.05			
Identification and Listing of Hazardous Waste	COMAR 26.13.02		Contains criteria and lists for identifying characteristic and listed wastes.	Use to determine if any materials handled during the removal action (for example, the extracted ground water, ground water treatment waste, and excavated sediments) are defined as hazardous waste, thus triggering on-site storage and disposal requirements.
Standards Applicable to Generators of Hazardous Waste	COMAR 26.13.03			
Accumulation Limit	COMAR 26.13.03.01 B(1) and (6) COMAR 26.13.03.05 E			Wastes that are hazardous waste pursuant to COMAR 26.13.02 and that are to be disposed of off-site (such as any ground water treatment sludge) shall be managed (while onsite) in accordance with the substantive standards in COMAR 26.13.03.05 E.
TSDs	COMAR 26.13.05			Applies to all Removal activities that involve handling hazardous waste.
Identification and Listing of Hazardous Wastes	40 CFR Part 261	Applicable/ Relevant and Appropriate	Provides definitions for when hazardous waste management requirements are triggered. Contains criteria and lists for identifying characteristic and listed wastes.	Use to determine if any materials handled during the removal action (for example, the extracted ground water, ground water treatment waste, and excavated sediments) are defined as hazardous waste, thus triggering on-site storage and disposal requirements.
Standards Applicable to Generators of Hazardous Waste	40 CFR Sections 262.11	Applicable/ Relevant and Appropriate	Establishes standards for generators of hazardous wastes.	Requires the determination of material as hazardous or non-hazardous prior to on-site storage or disposal.
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs)	40 CFR Part 264	Applicable/ Relevant and Appropriate	Regulations for owners and operators of TSDFs which define acceptable management of hazardous wastes.	Applies to all removal activities that involve handling hazardous waste.
General Facility Standards (Subpart B)	40 CFR Part 264.13 - General waste analysis 264.14 - Security 264.15 - General Inspection Requirements 264.16 - Personnel Training 264.17 - General requirements for ignitable, reactive, or incompatible wastes 264.18 - Location standards			
Preparedness and Prevention (Subpart C)	40 CFR Part 264.30 - Applicability 264.31 Design and operation of facility 264.32 - Required equipment 264.33 - Testing and maintenance of equipment 264.34 - Access to communication or alarm system 264.35 - Required aisle space			

A M I or TIC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARARs in the Context of this Removal Project
Contingency Plan and Emergency Procedures (Subpart D)	40 CFR Part 264.50 - Applicability 264.51 - Purpose and implementation of contingency plan 264.52(a) - Content of contingency plan 264.54(b-c) - Amendment of contingency plan 264.55 - Emergency coordinator			
Closure and Post-	40 CFR Part 264.111 - Closure performance standards 264.114 - Disposal or decontamination of equipment, structures and soils			
Use and Management of Containers (Subpart I)	264.170-179			
Tank Systems (Subpart J)	264.190-200 Only applicable for onsite treatment systems and temporary storage tanks containing hazardous wastes.			
Surface Impoundments (Subpart K)	264.220-223, 226-230			
Waste Piles (Subpart L)	264.250-254, 256-259			
Air Emission Standards for Process Vents (Subpart AA)	264.1030-1036			
Air Emission Standards for Equipment Leaks (Subpart BB)	264.1050-1063			
Air Emission Standards for Tanks, Surface Impoundments, and Containers (Subpart CC)	264.1080-1088			
Containment Buildings (Subpart DD)	264.1100-1102			
RCRA* Land Disposal Restrictions	40 CFR Part 268	Applicable/ Relevant and Appropriate	Restrictions on land disposal of hazardous wastes.	If placement of sediments that are hazardous waste occurs (triggering the requirements of the land ban regulations), treatment may be required prior to placement.

ARAR or TBC	Legal Citation	Classification	Summary of Requirement	Further Specification and/or Details Regarding ARs In the Context of this Removal Project
National Historic Preservation Act of 1966, as amended	36 C.F.R. §§ 800.4(b-c), 800.4(e), 800.5(e), 800.9	Applicable	Requires Removal action to take into account effects on properties included on or eligible for the National Register of Historic Places.	A cultural resource survey will be performed prior to construction to determine if there are any cultural resources, included on or eligible for the National Register of Historic Places, that will be adversely affected by the removal project. If present, steps will be taken to avoid, minimize or mitigate the adverse impacts. Only substantive requirements must be met.

*Resource Conservation and Recovery Act of 1976; Hazardous and Solid Waste Amendments of 1984